



Wheel.Arm

by [ted99tw](#) on April 23, 2016

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Author:ted99tw
maker for educational kit since 2014

Intro: Wheel.Arm

Wheel.Car is derived from MeArm. All the bones are laser cut with 2 A4 3mm acrylic.

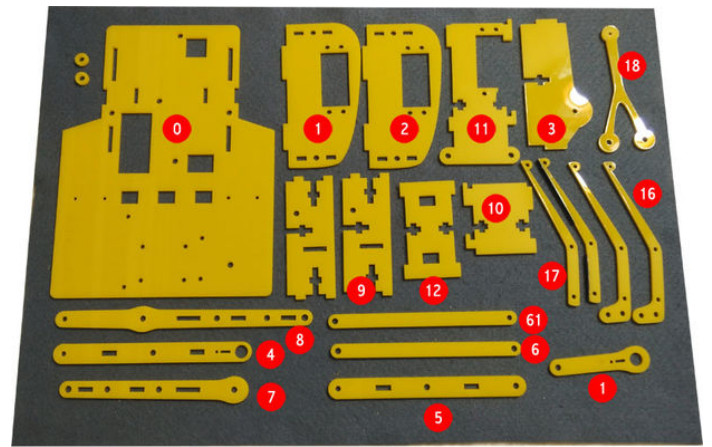
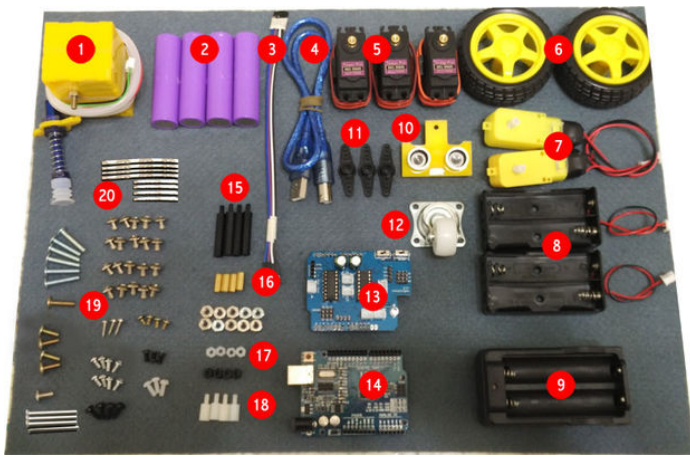
The project is now on crowdfunding in Taiwan and will open source after May.20.

[crowdfunding](#) (Chinese)



Step 1: Out of box

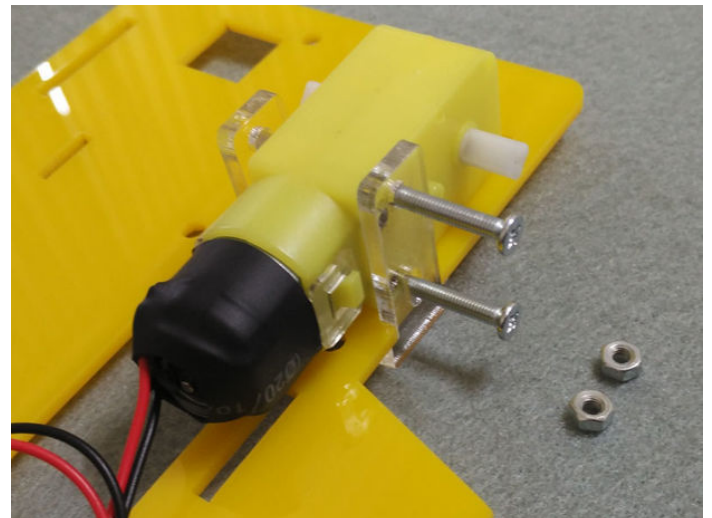
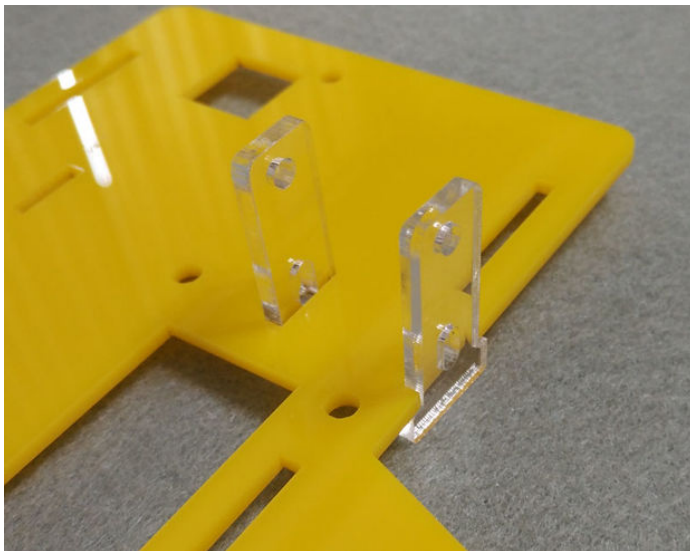
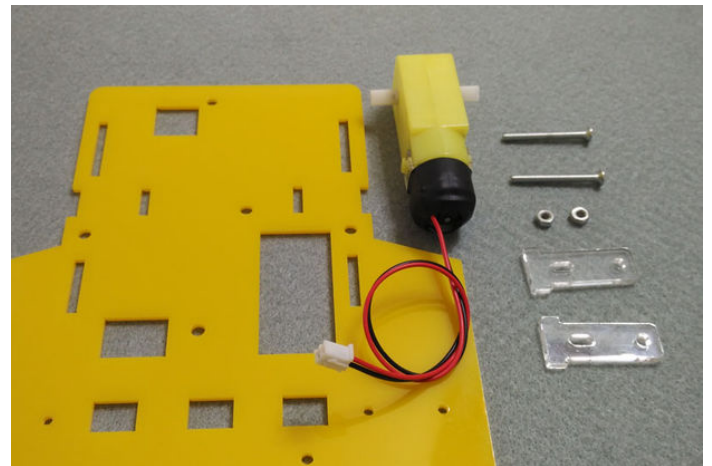
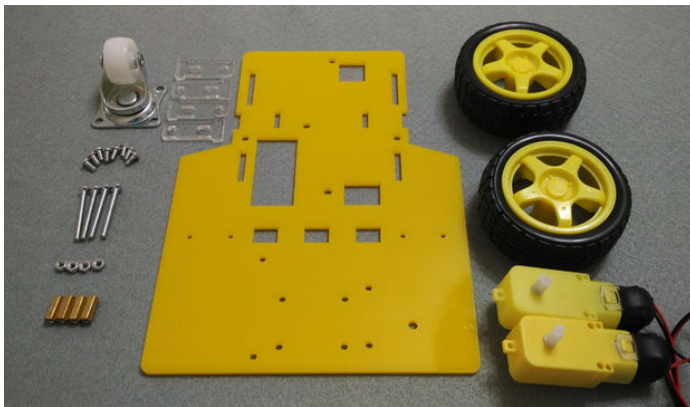
- 1 vacuum
- 2 LiOn x 4
- 3 4-pin DuPon female-to-female cable
- 4 USB cable
- 5 MG996 servo x 3
- 6 wheel 65mm x 2
- 7 TT motor x 2
- 8 battery case x 2
- 9 batter charger
- 10 untra sound sensor
- 11 wing for servo x 3
- 12 free rotation wheel
- 13 Arduino expansion board
- 14 Arduino Uno
- 15 Nylon hex nut 30x6
- 16 copper column
- 17 nuts (various size)
- 18 Nylon hex nut 10x6
- 19 screws (various size)
- 20 rubber

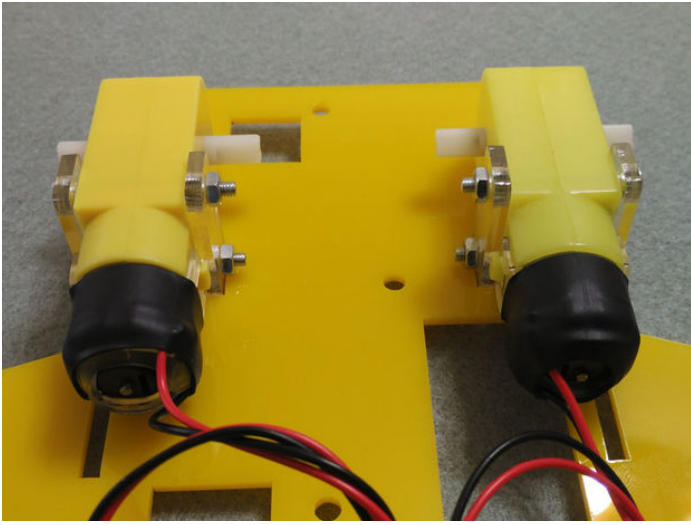
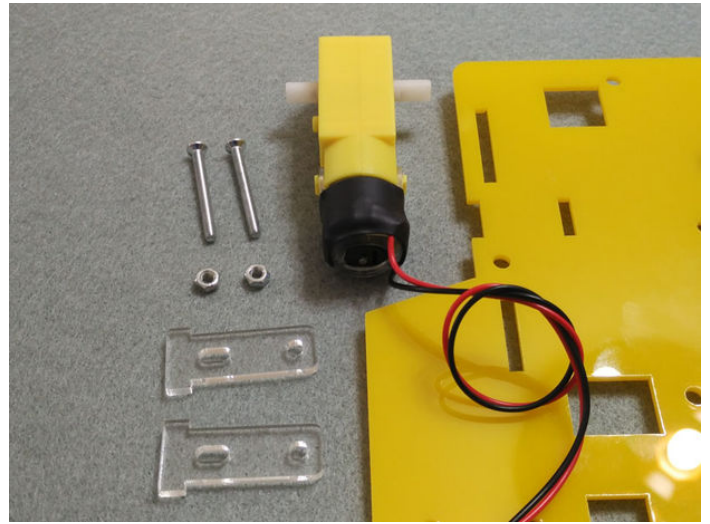
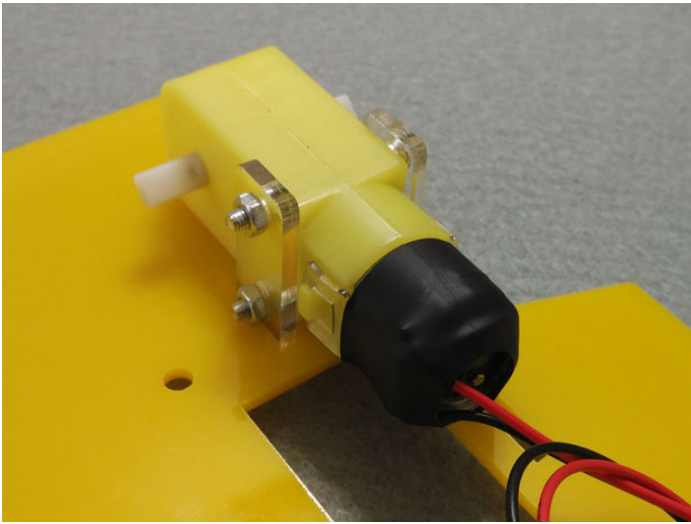


Step 2: 2 wheels

materials:

1. 2 wheels
2. 2 motors
3. 4 supports
4. M3x30 x 3
5. M3 nuts x 4

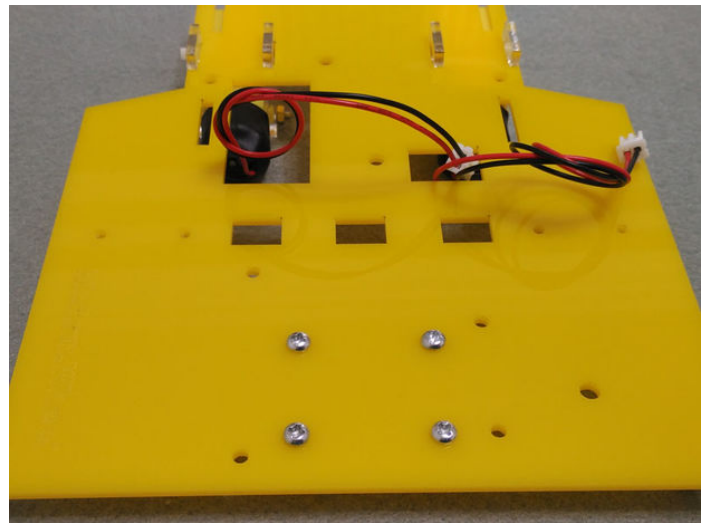
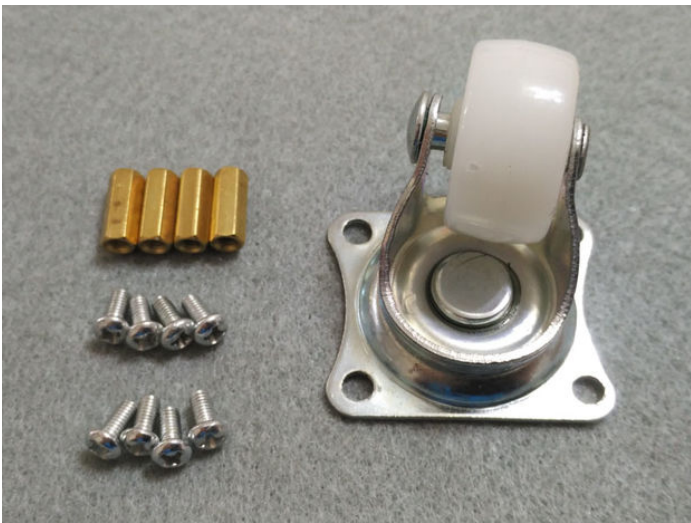


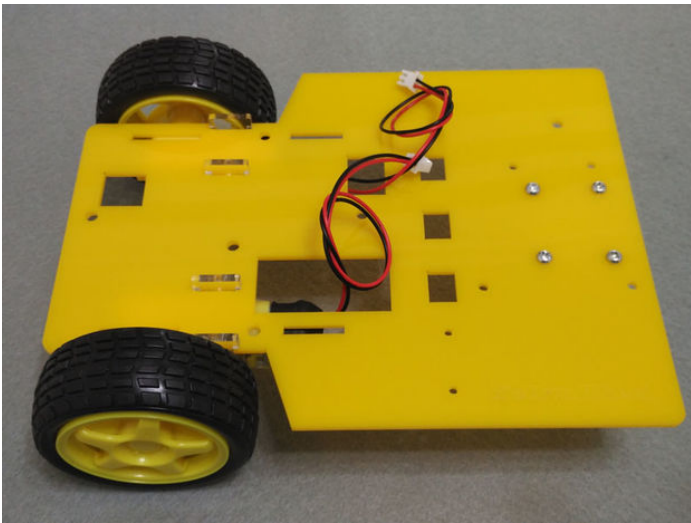
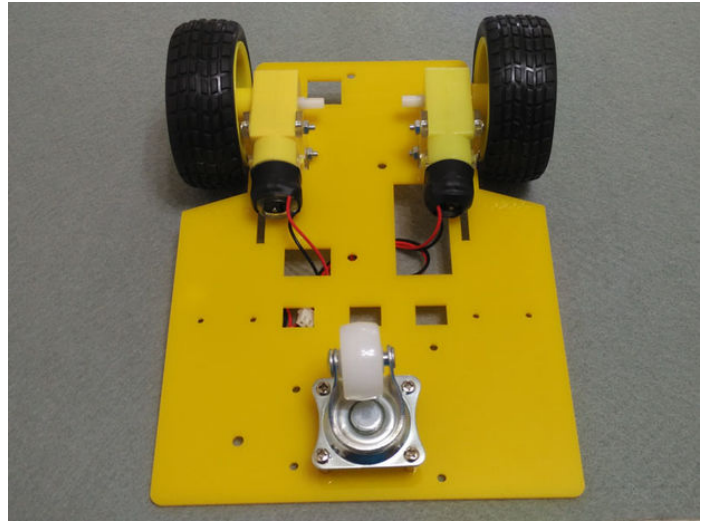
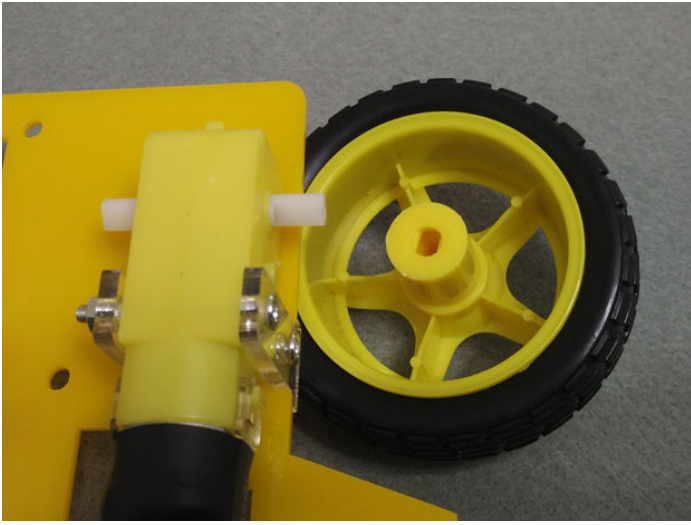
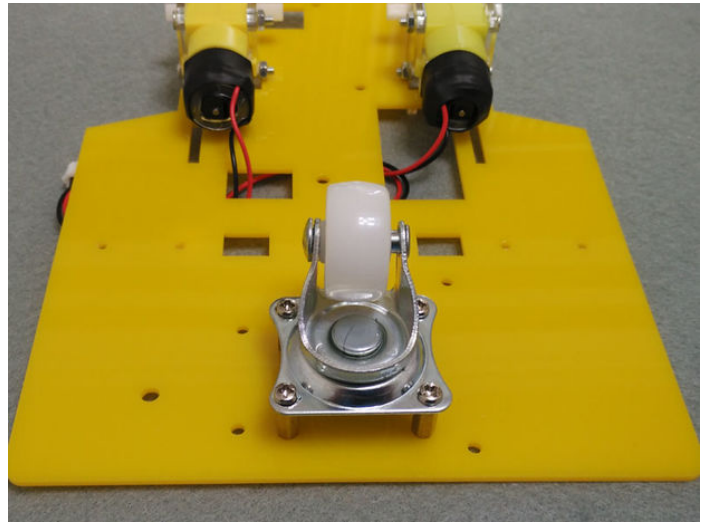
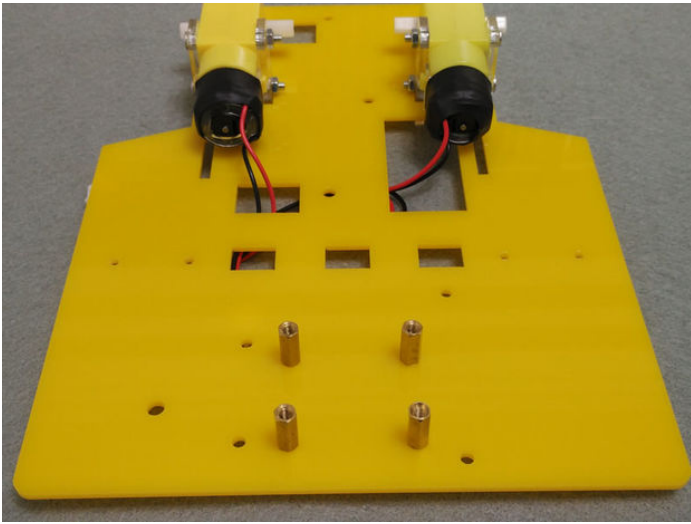


Step 3: The 3rd wheel

materials:

1. caster
2. cooper M3x10 x 4
3. screw M3x6 x 8

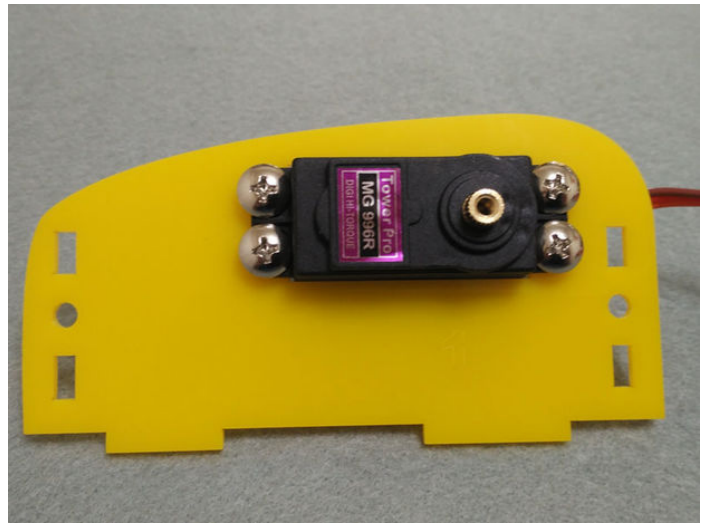
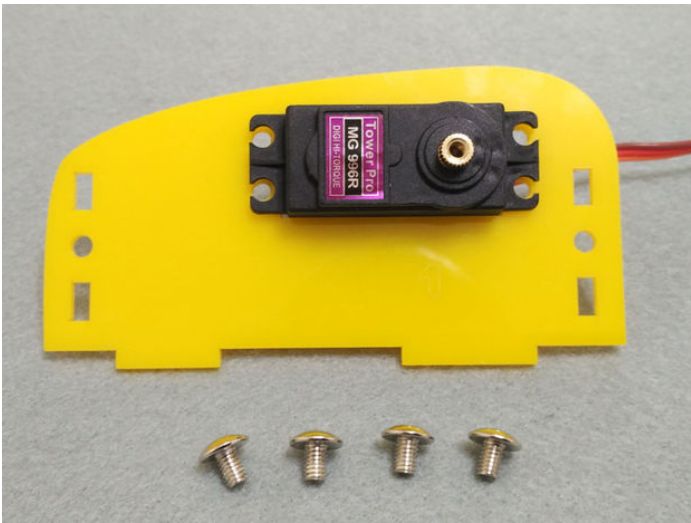
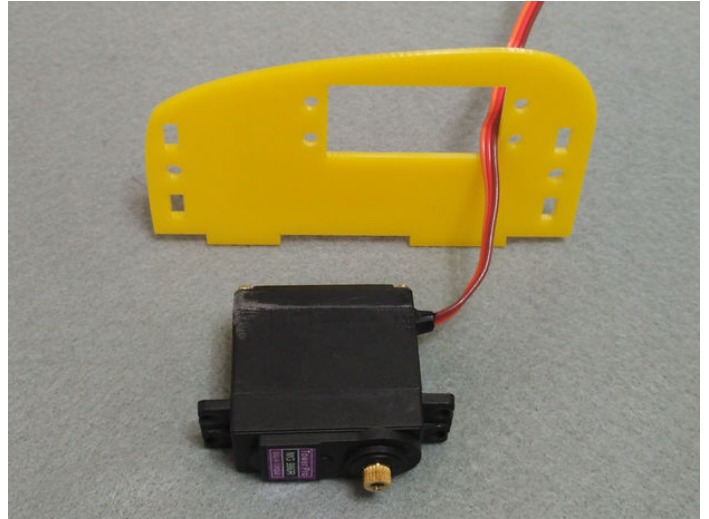


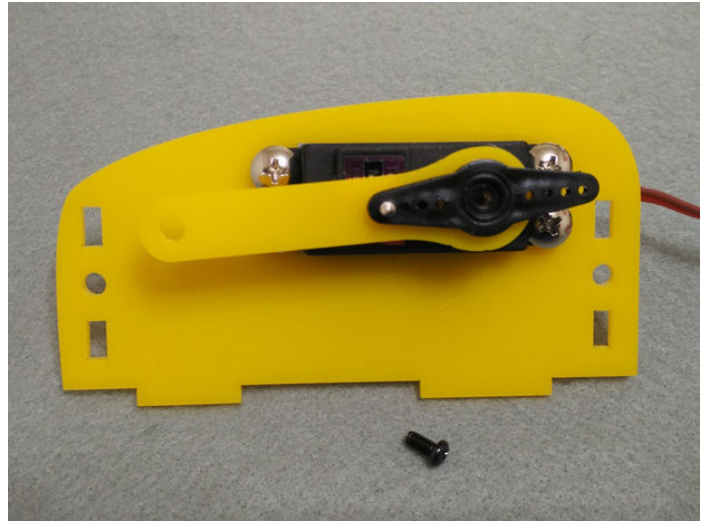


Step 4: Left servo

materials:

1. servo x 1
2. M4x6 x 4
3. M3x6
4. acrylic No.1, No.15

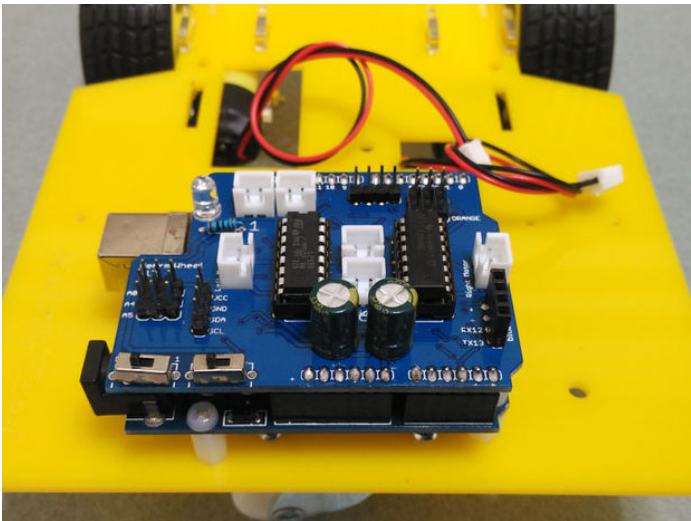
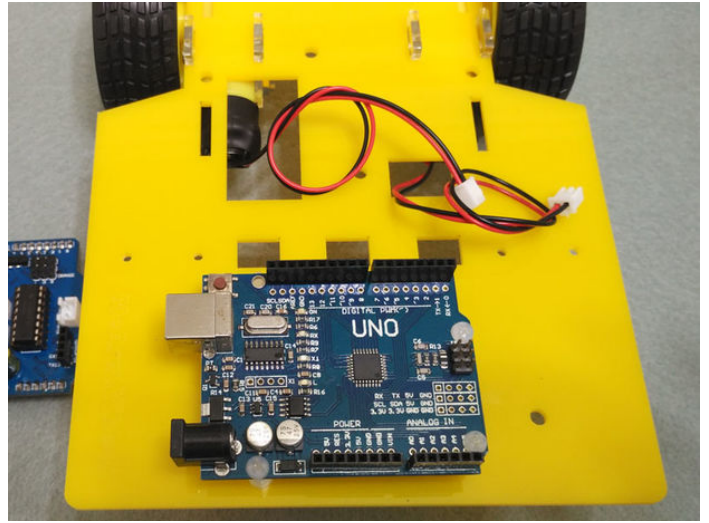
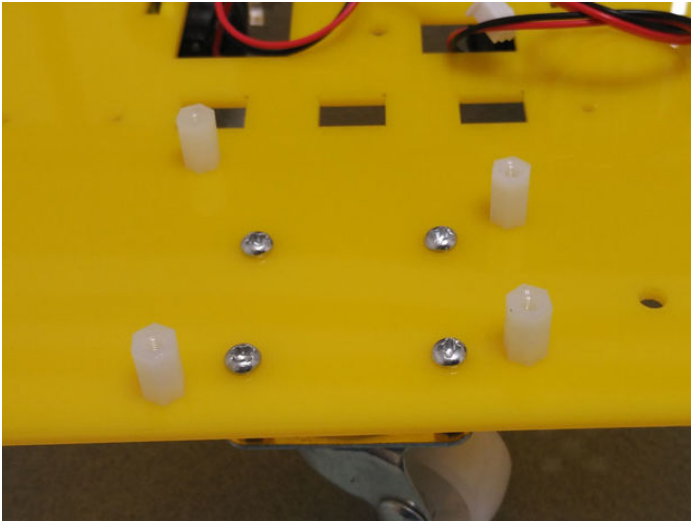
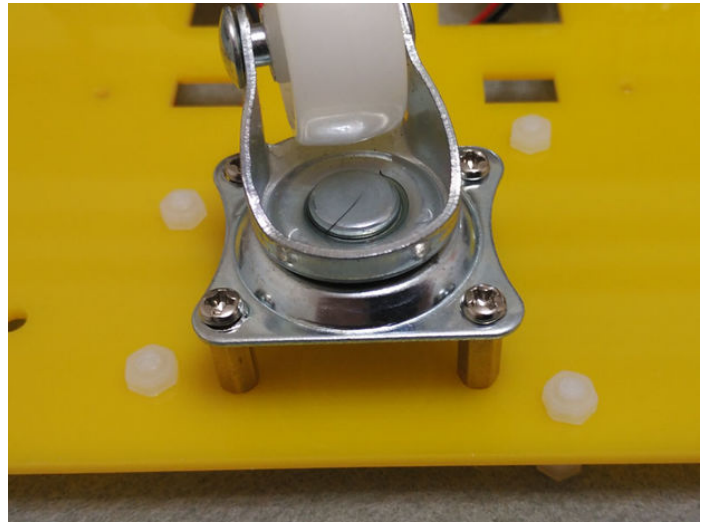
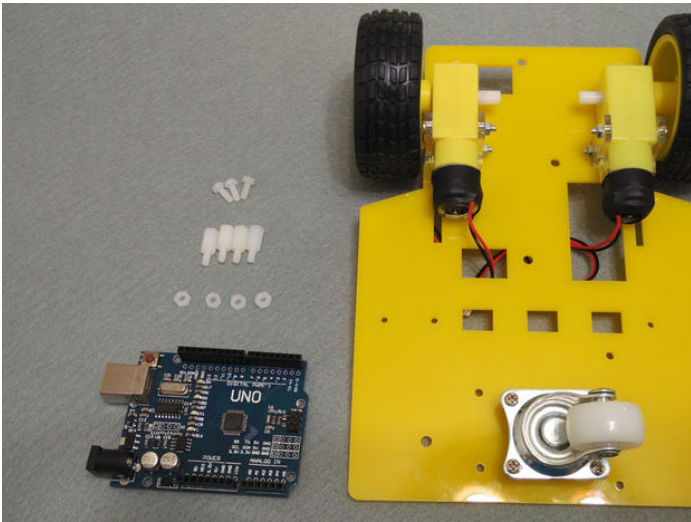


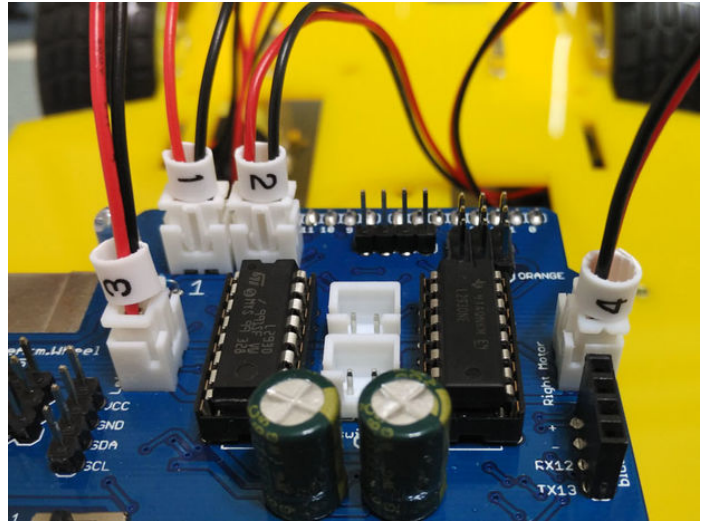
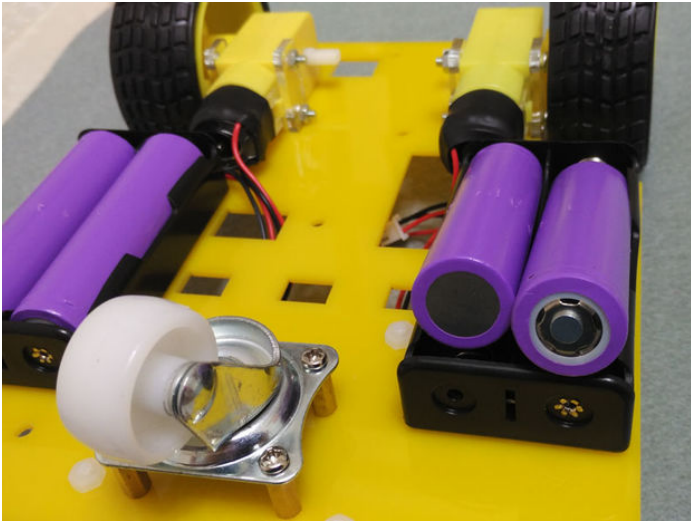
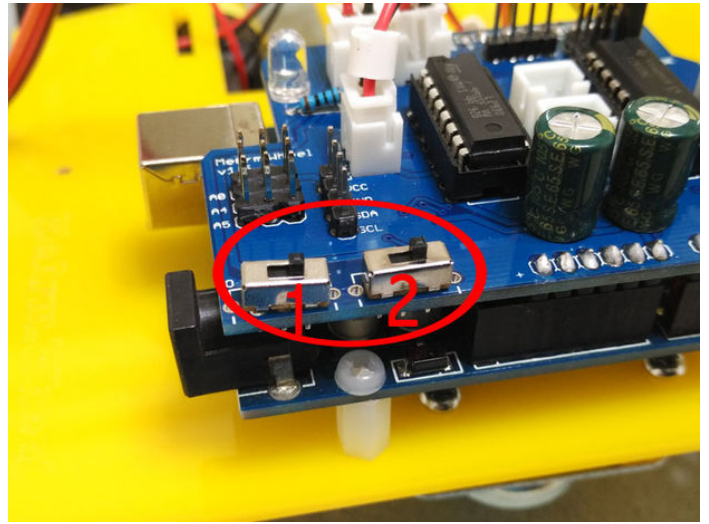
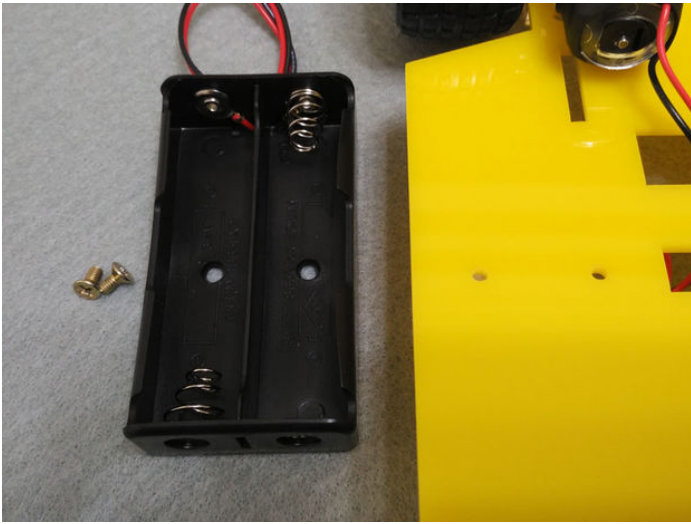


Step 5: Add Arduino board

materials:

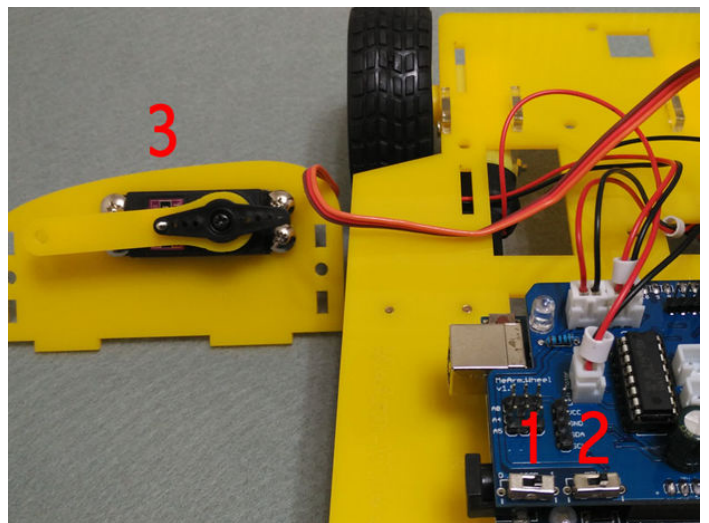
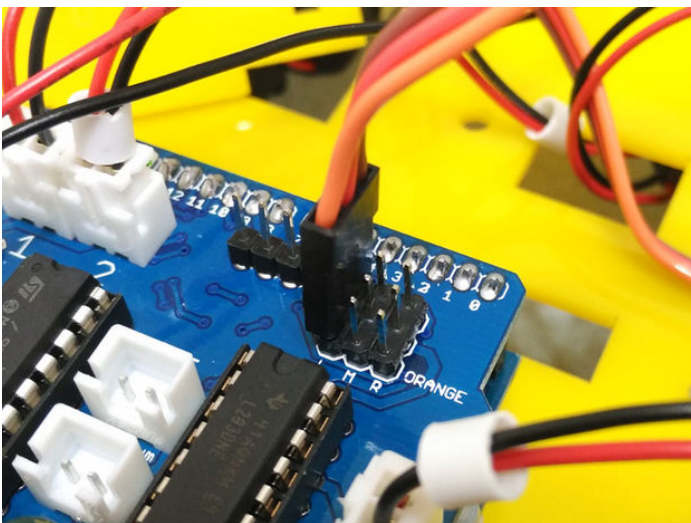
1. Arduino Uno
2. Arduino Expansion Board
3. Nylon screw and nuts x 4
4. LiON battery x 4
5. battery holder x 2





Step 6: Positioning 90 degree

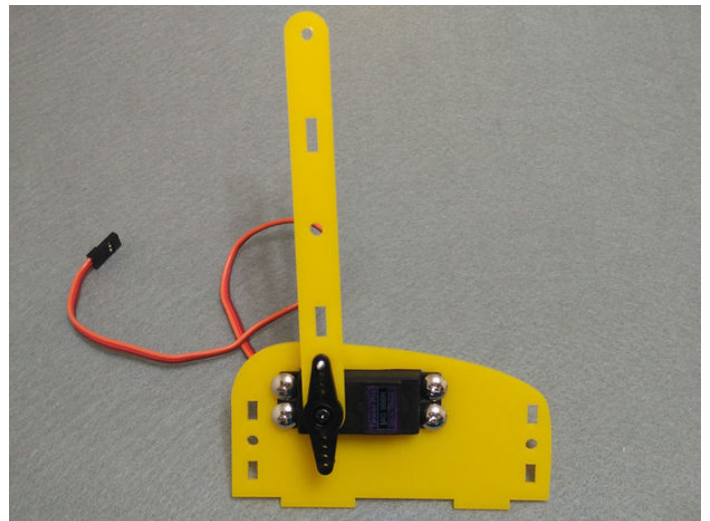
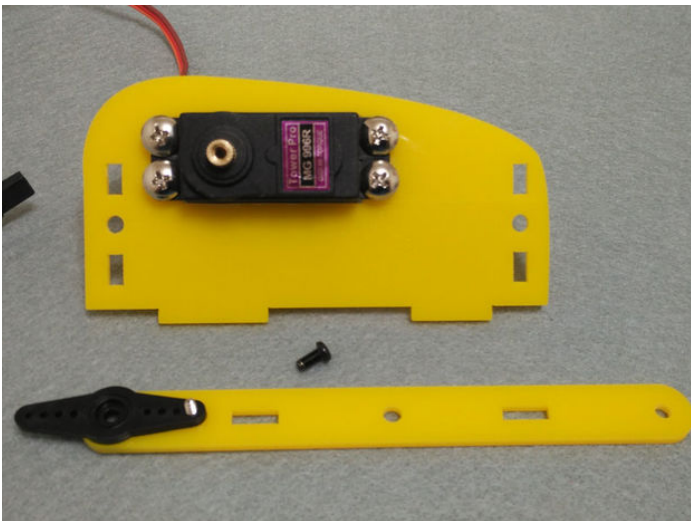
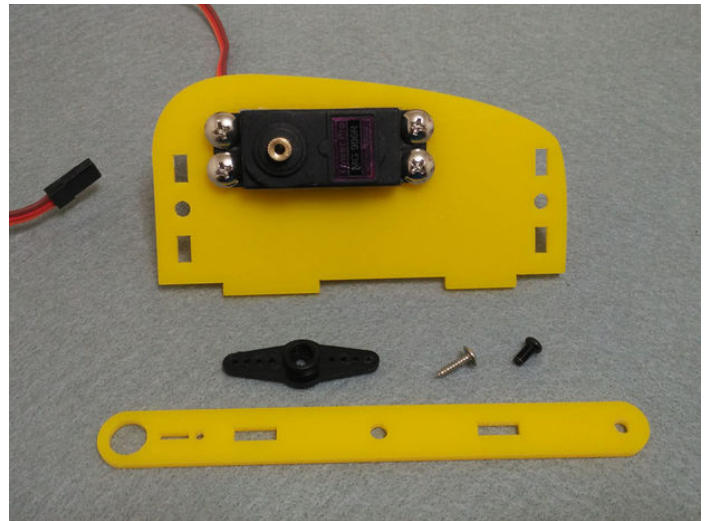
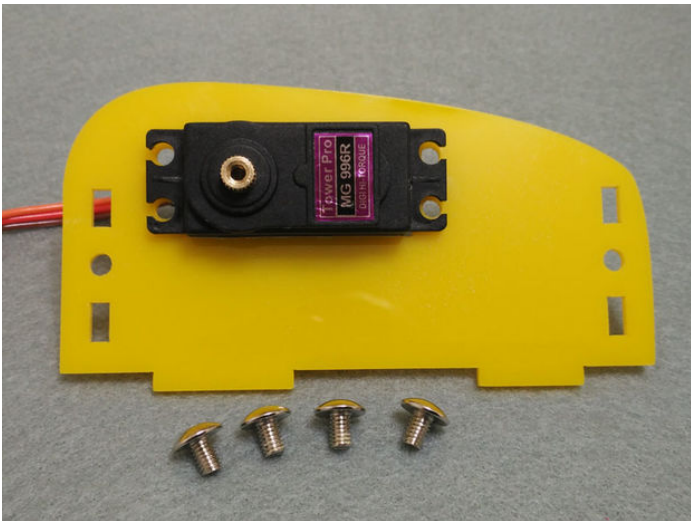
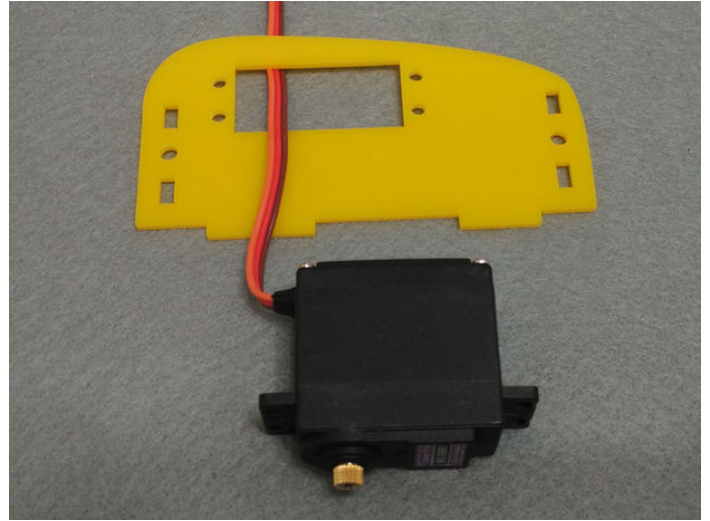
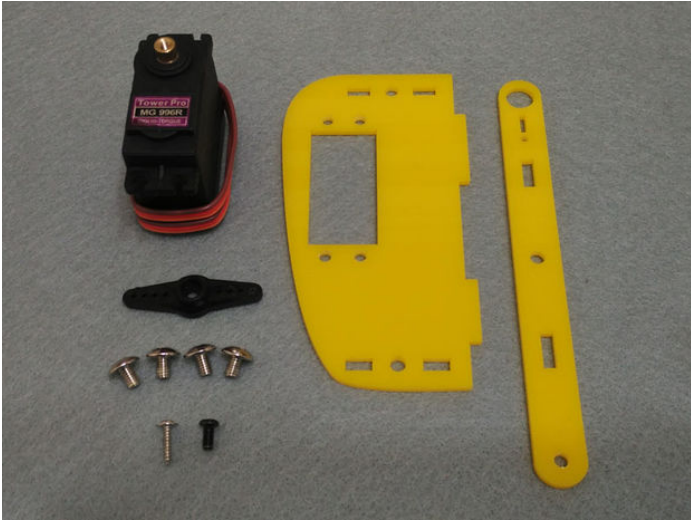
- 1. motor power on
- 2. mcu power on
- 3. 90 degree position

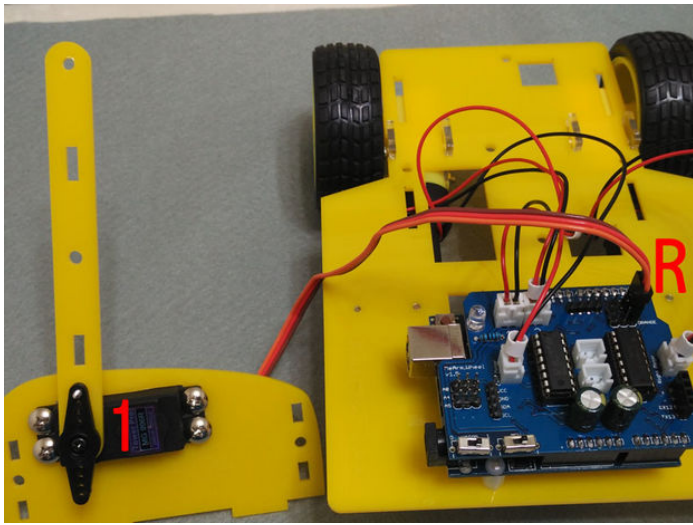


Step 7: Right servo

materials:

1. servo
2. M4x6 x 4
3. acrylic No.2, No. 4

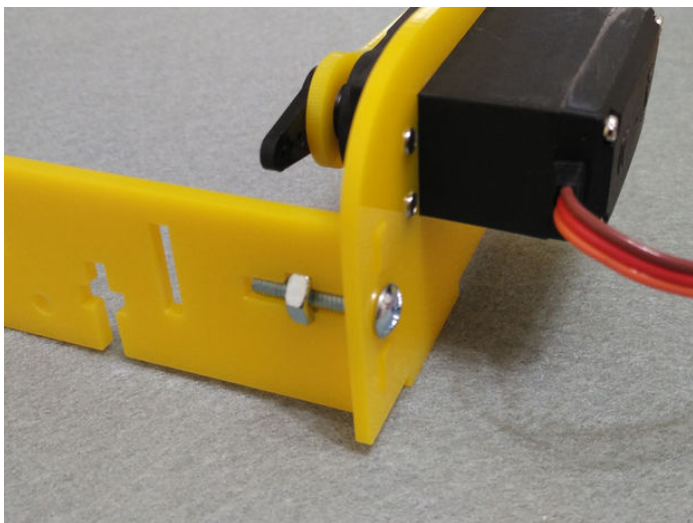
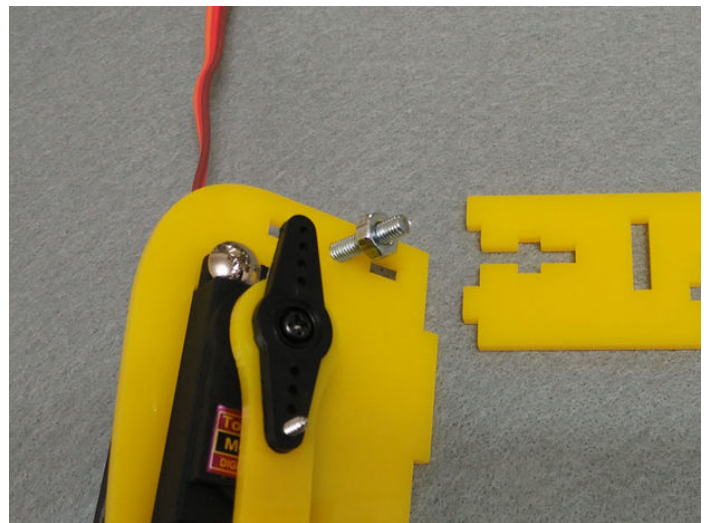


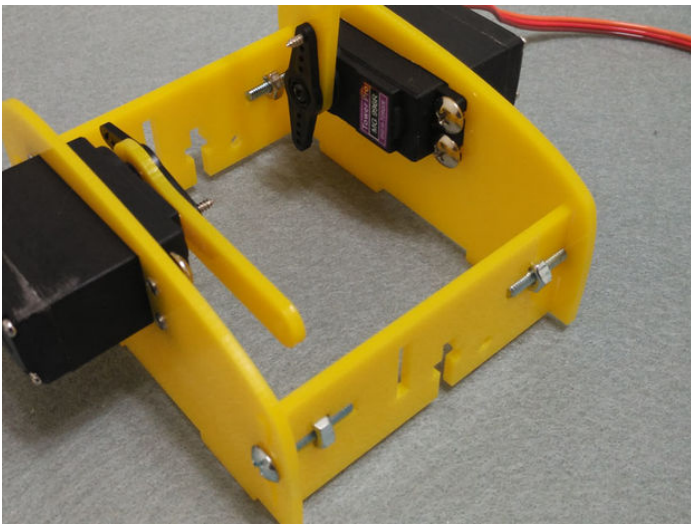
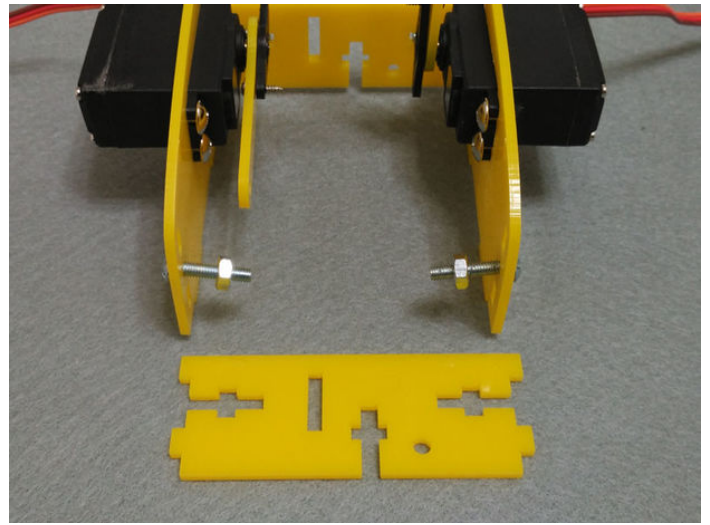
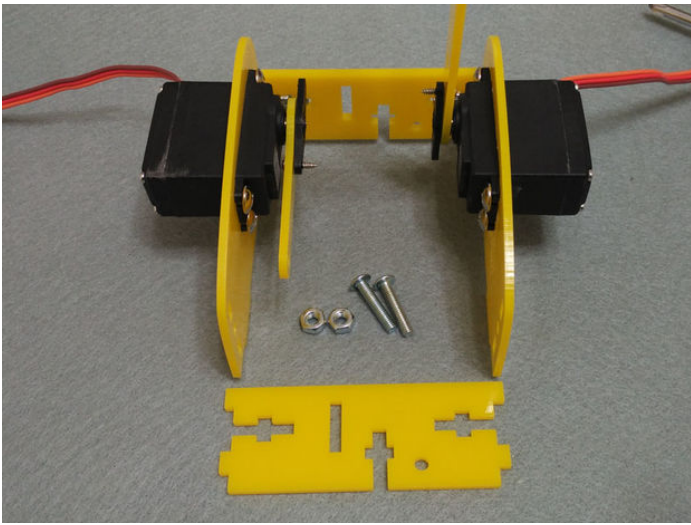


Step 8: Housing

materials:

1. acrylic No.9
2. M4x20 x 4
3. M4 nuts x 4

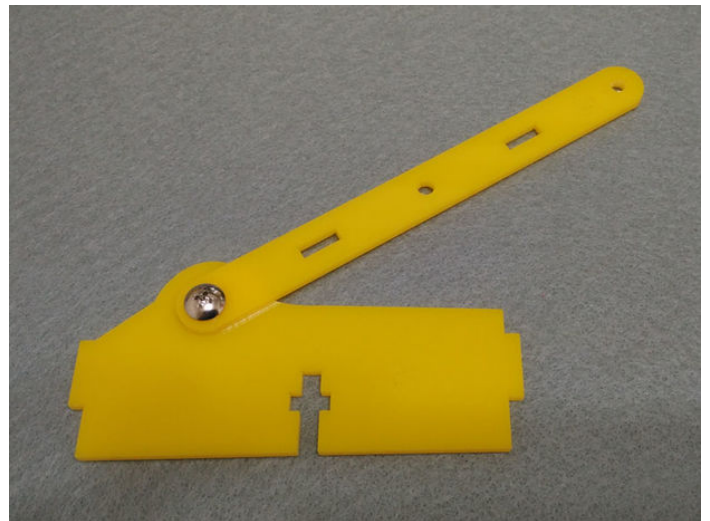
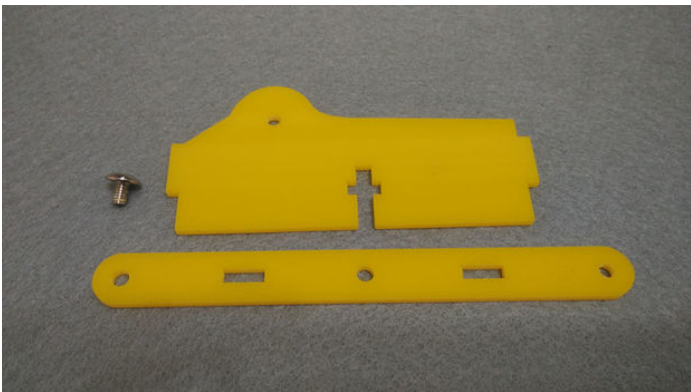


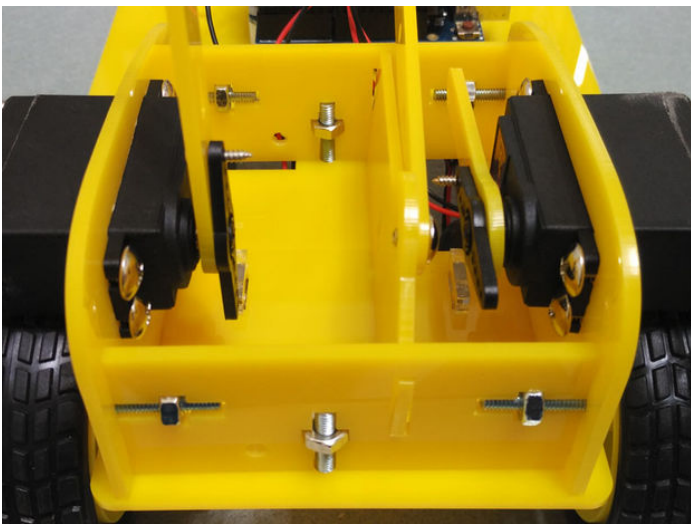
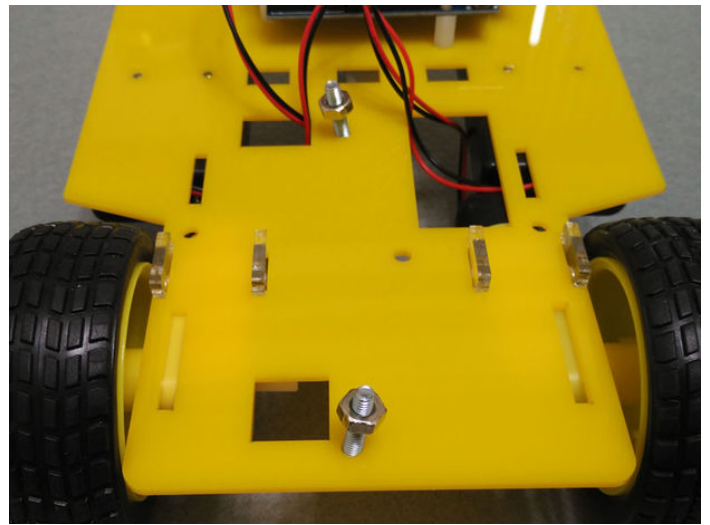
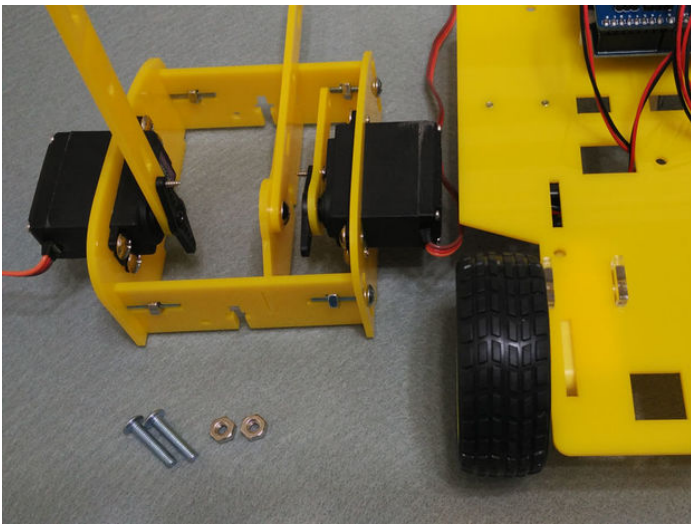
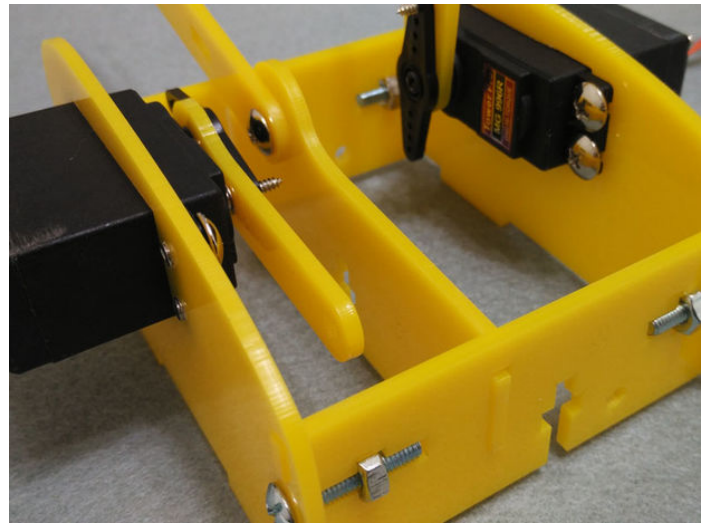
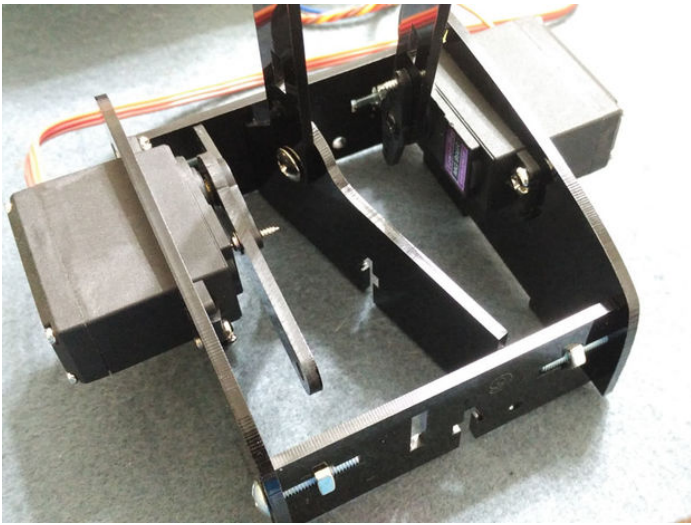


Step 9: Attach to the base

materials:

1. acrylic No.3, No.5
2. M4x6 x 1, M4x20 x 2
3. M4 nuts x 2

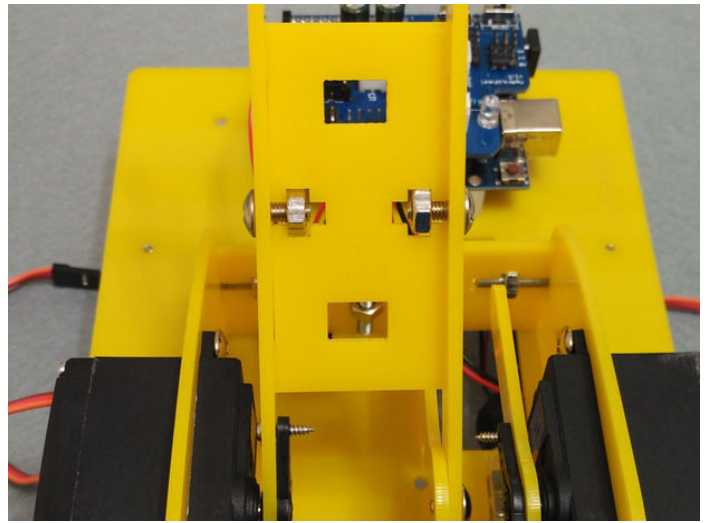
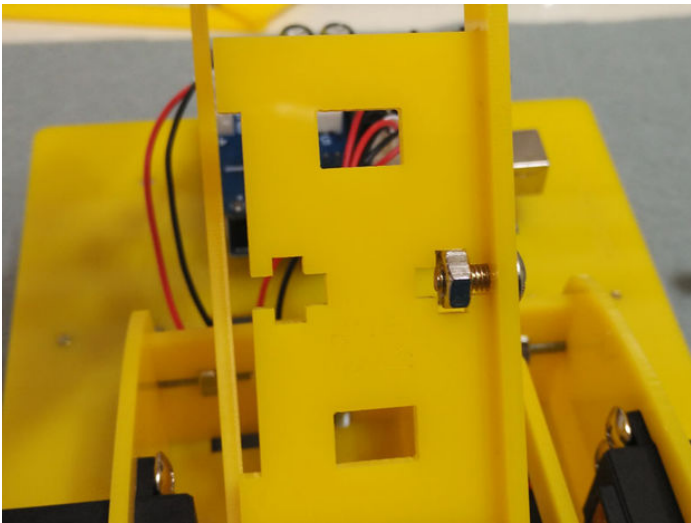
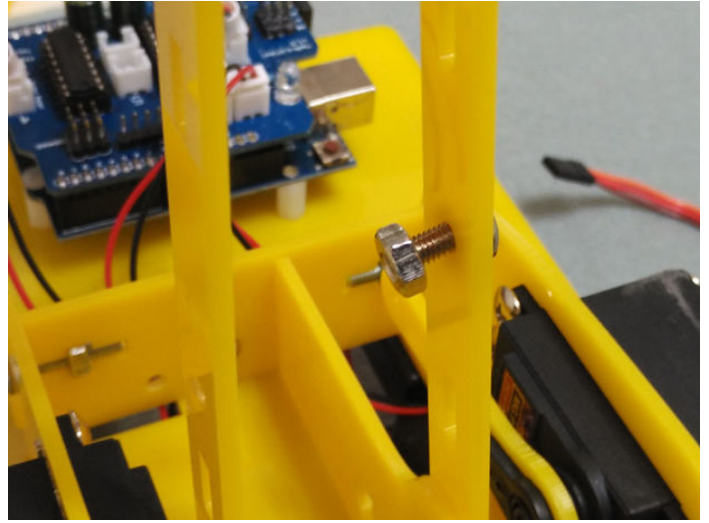
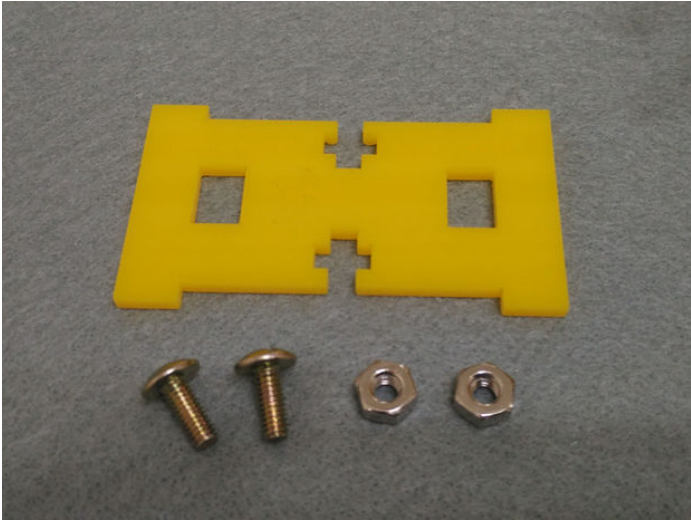




Step 10: Mid support

materials:

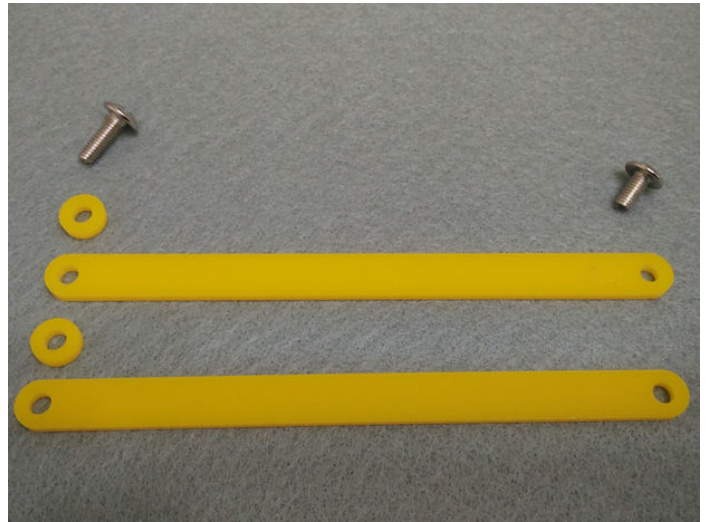
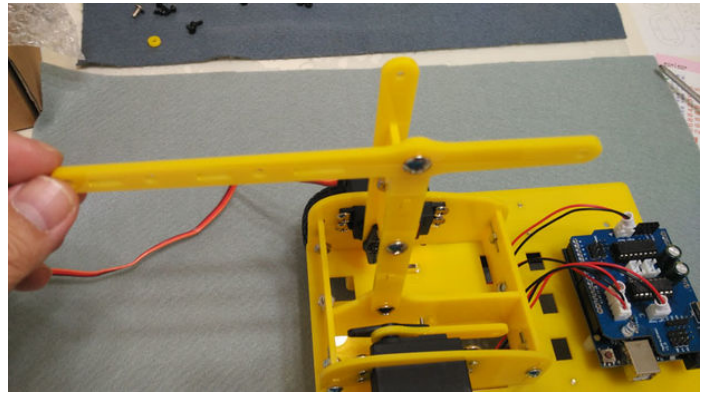
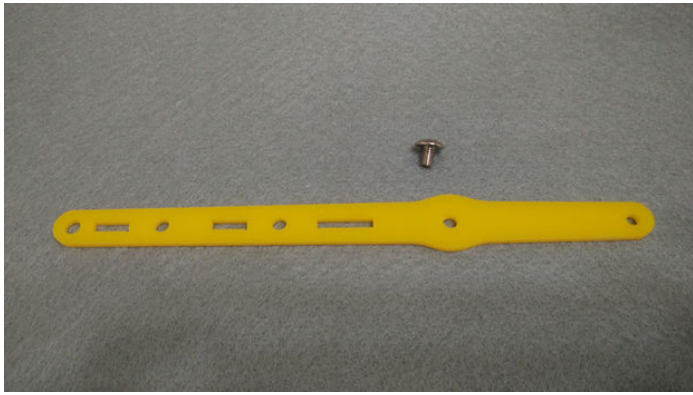
1. acrylic No.12
2. M4x12 x 2
3. M4 nuts x 2

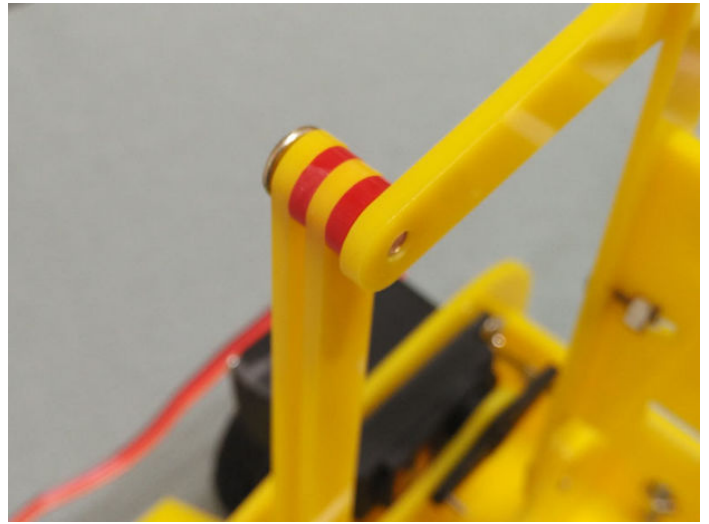
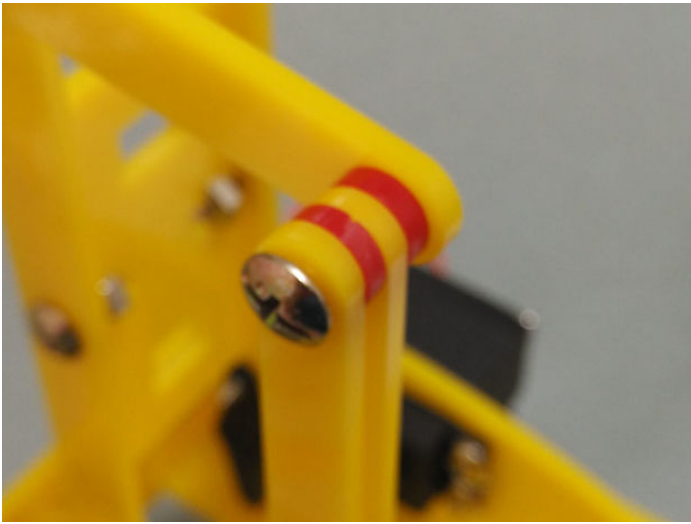


Step 11: Upper left stick

materials:

1. acrylic No.8, No.6, No.61
2. M4x6 x 1, M4x6 x 1, M4x14 x 1

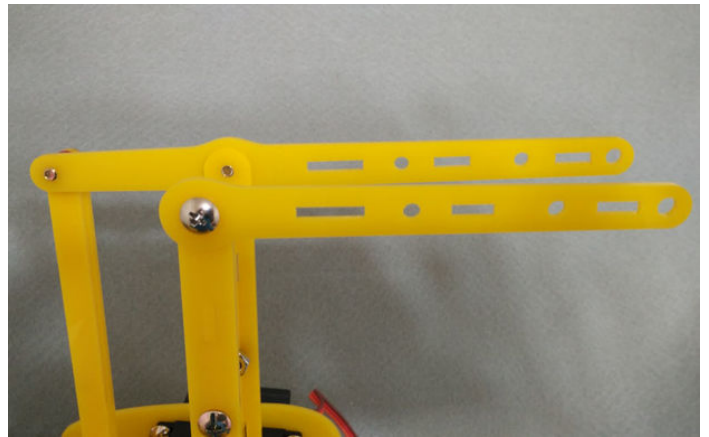




Step 12: Right upper stick

materials:

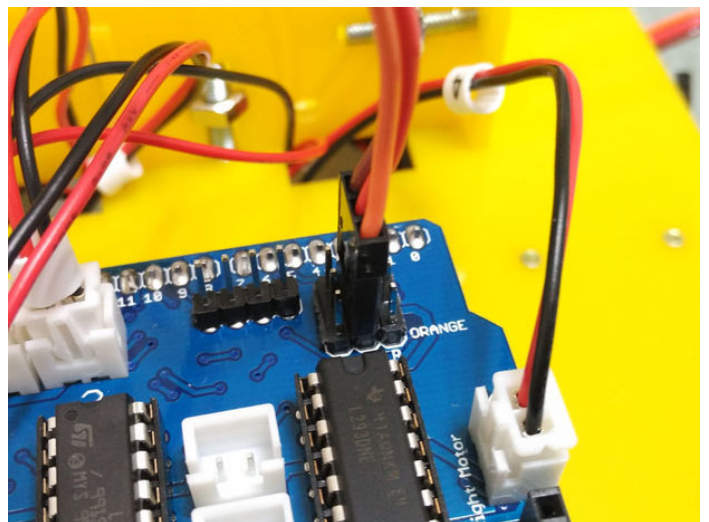
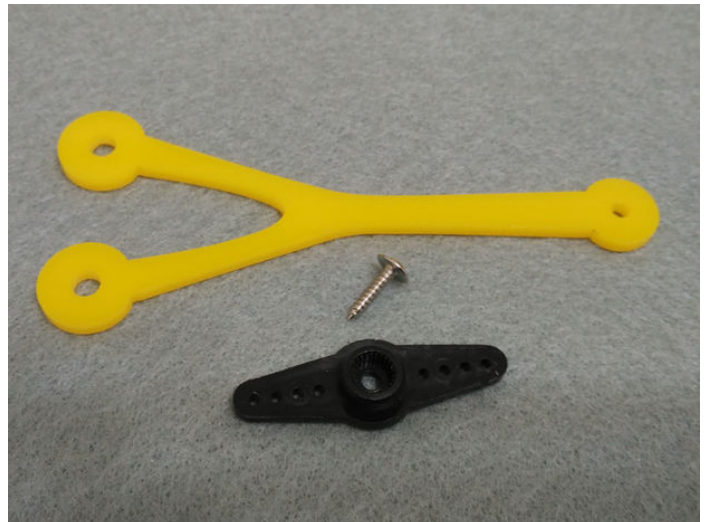
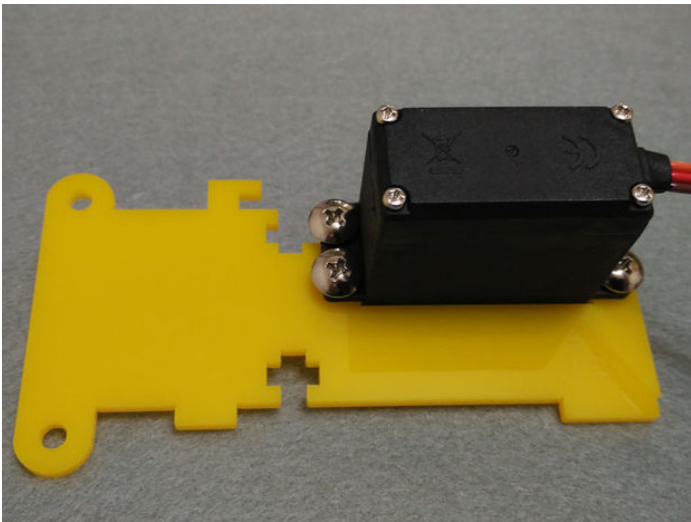
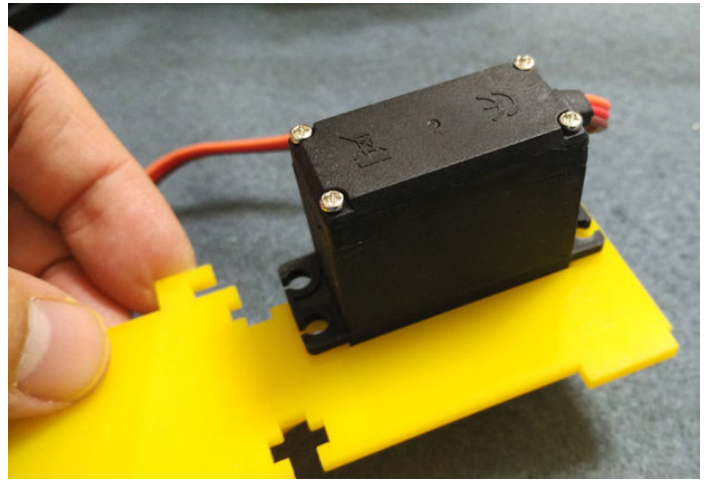
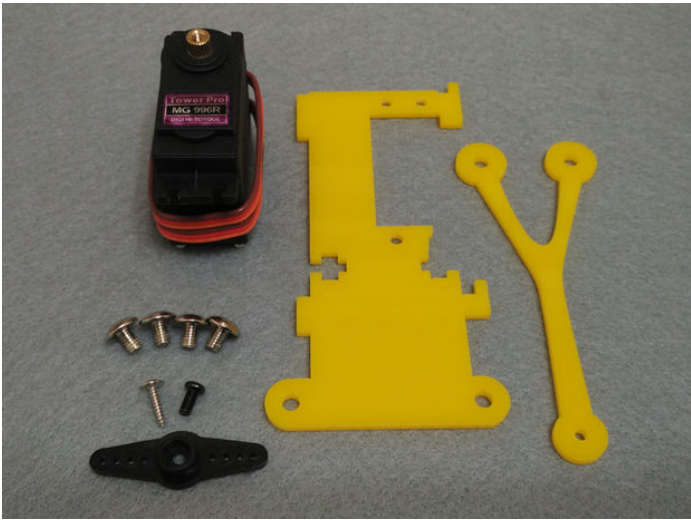
1. acrylic No.7
2. M4x6 x 1

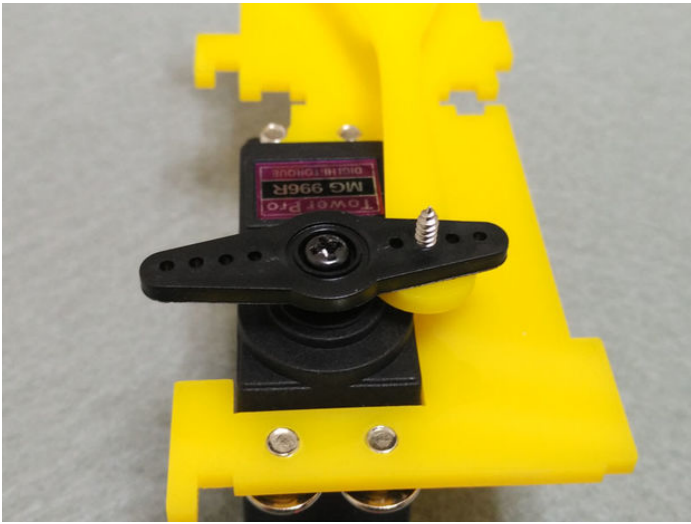


Step 13: 3rd servo

materials:

1. servo x 1
2. M4x6 x 4
3. M3x6 x 1
4. acrylic No.11, 18

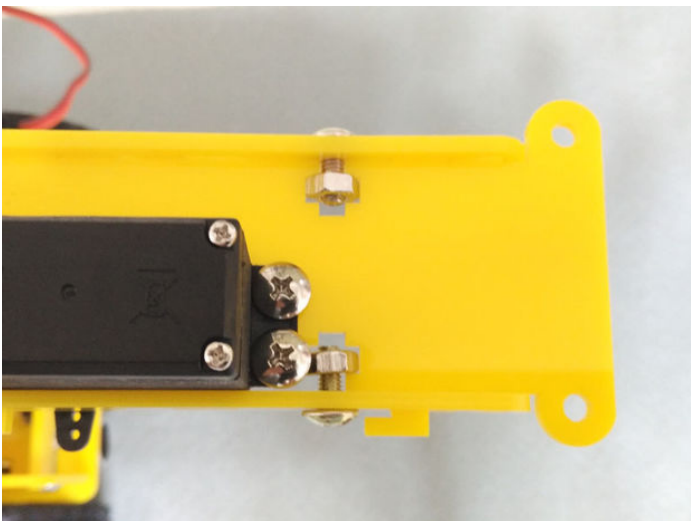
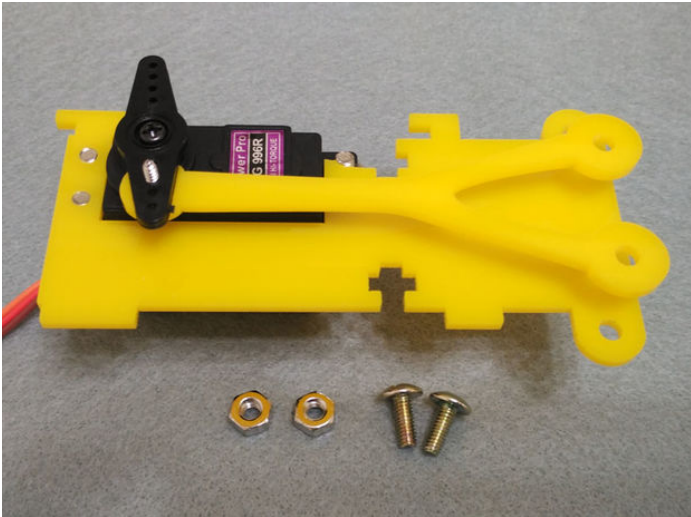




Step 14: Attach 3rd servo plate

materials:

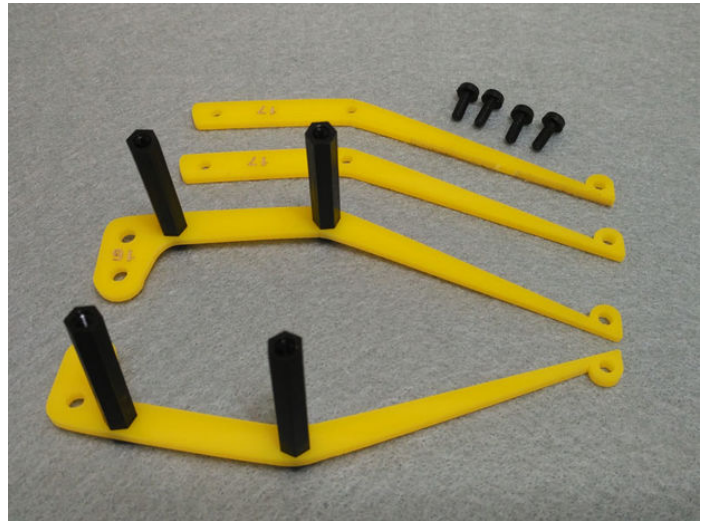
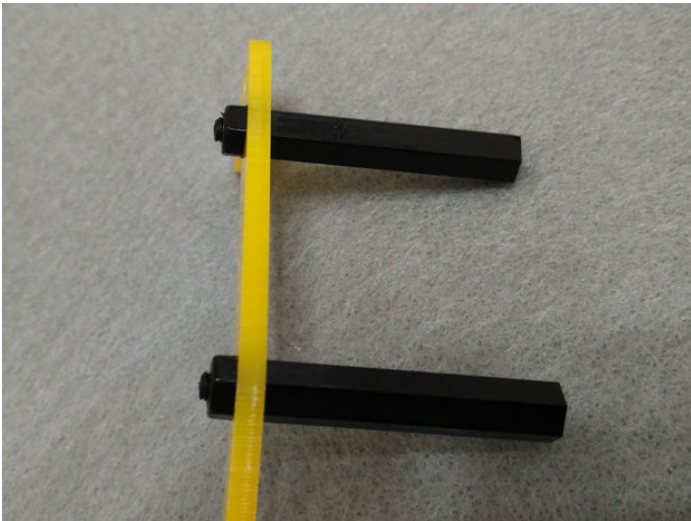
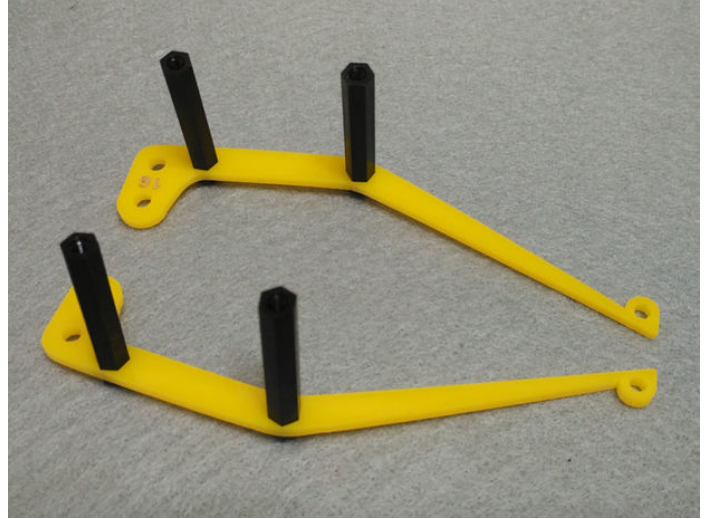
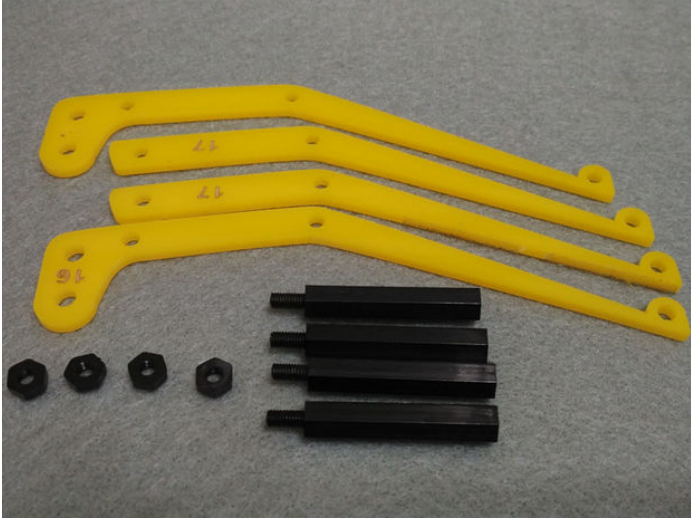
1. M4x12 x 2
2. M4 nuts x 2

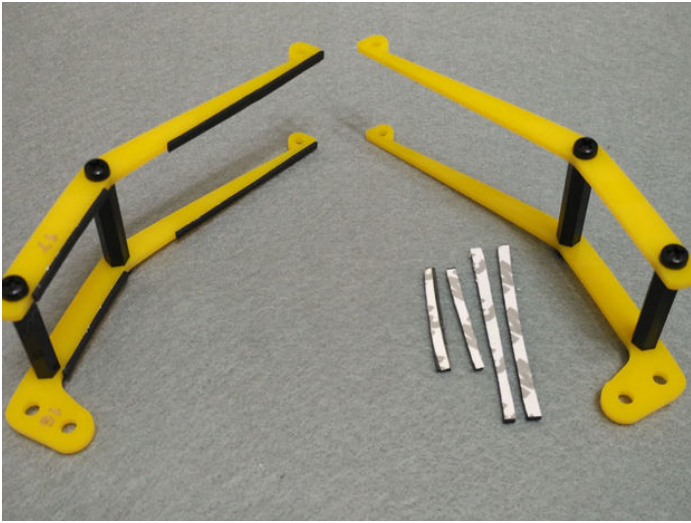
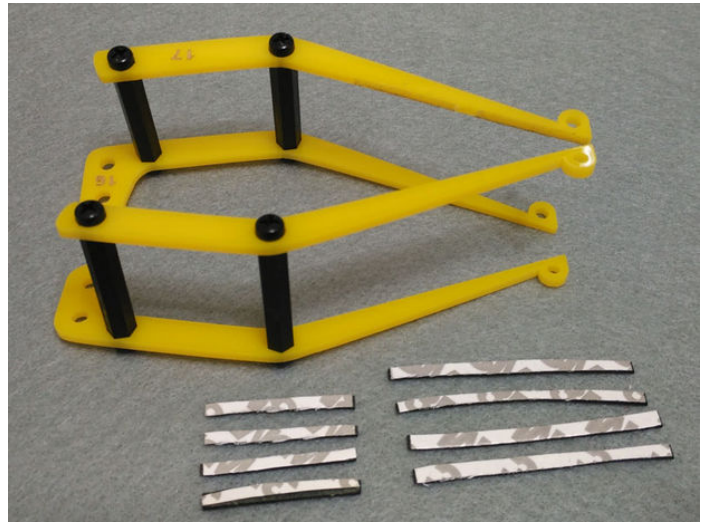
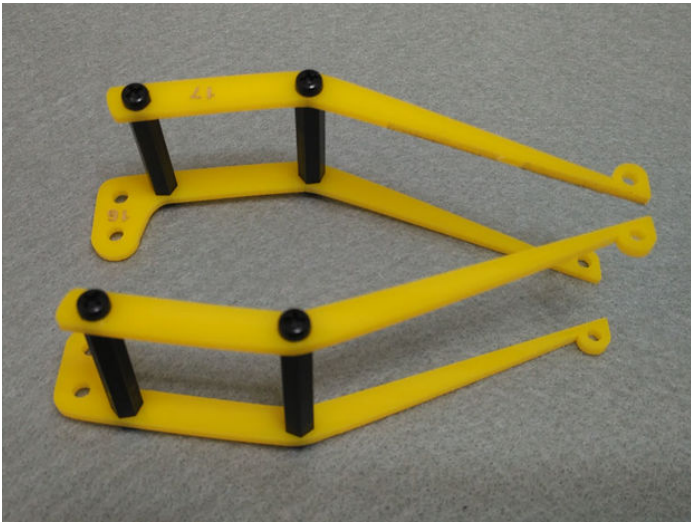


Step 15: Gripper

materials:

1. nylon M3 nuts x 4
2. nylon stickx30 x 4
3. nylon M3x6 x 4
4. rubberx8
5. acrylic No.16x2, 17x2

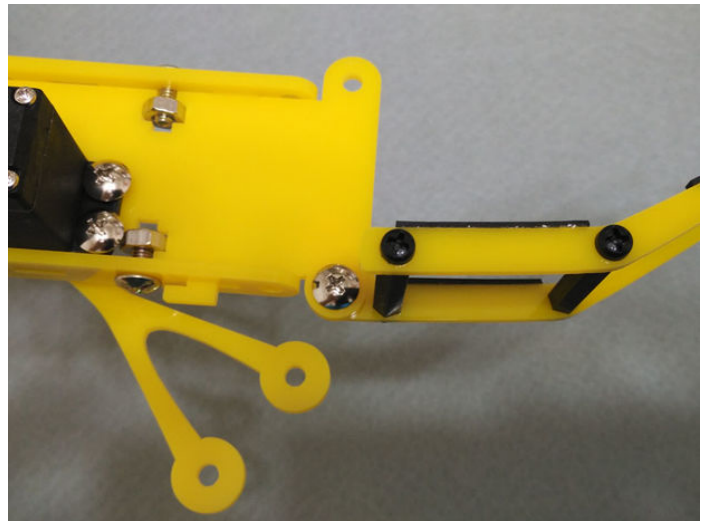


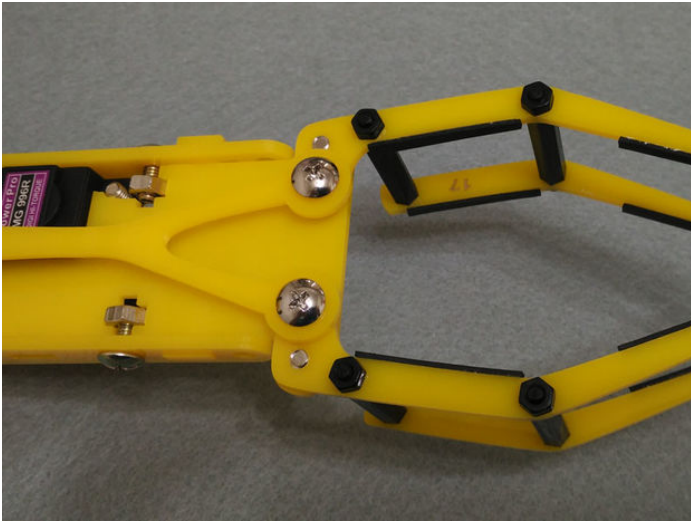
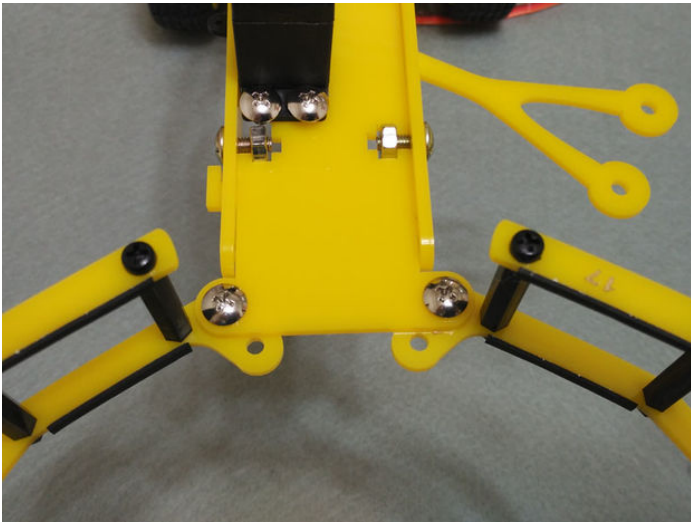


Step 16: Attach gripper

materials:

1. M4x6 x 4

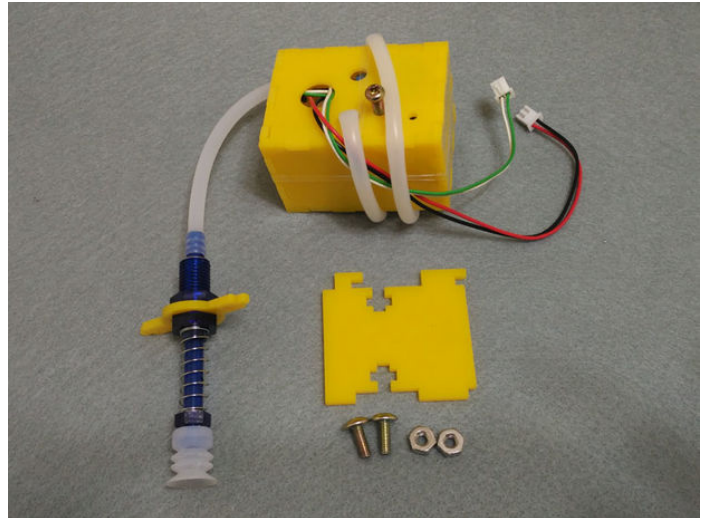
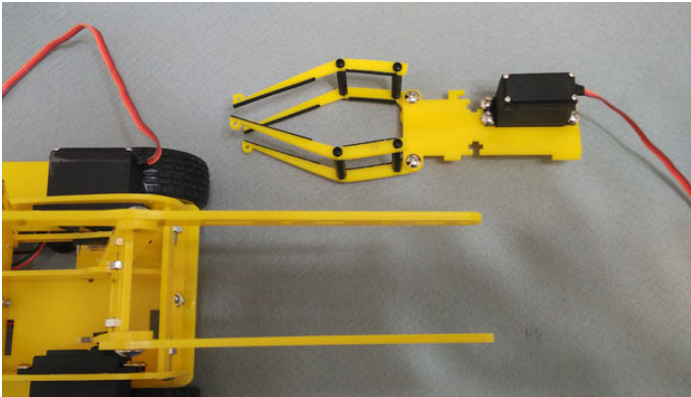


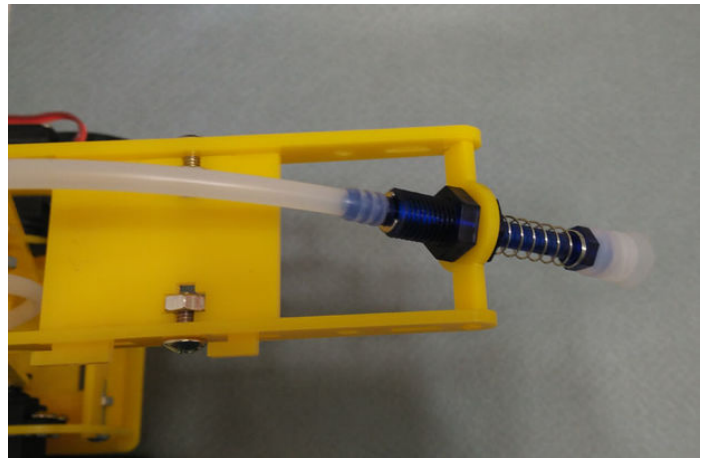
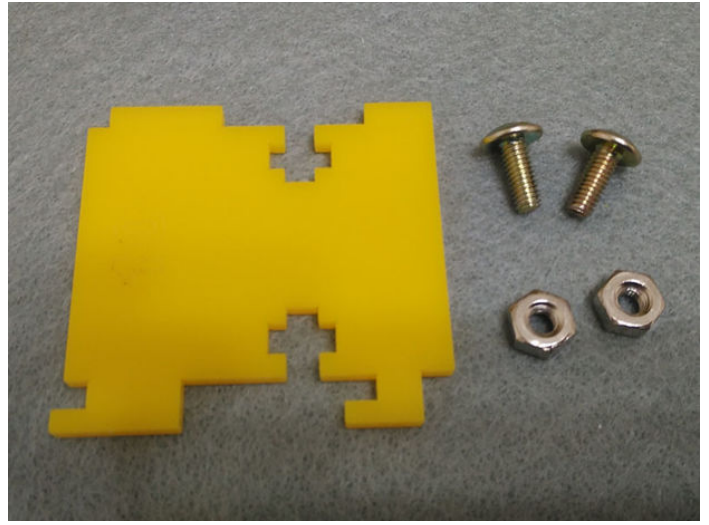
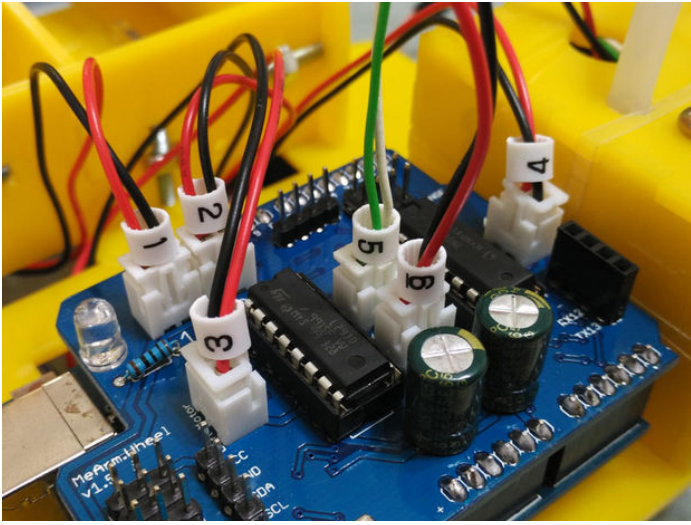
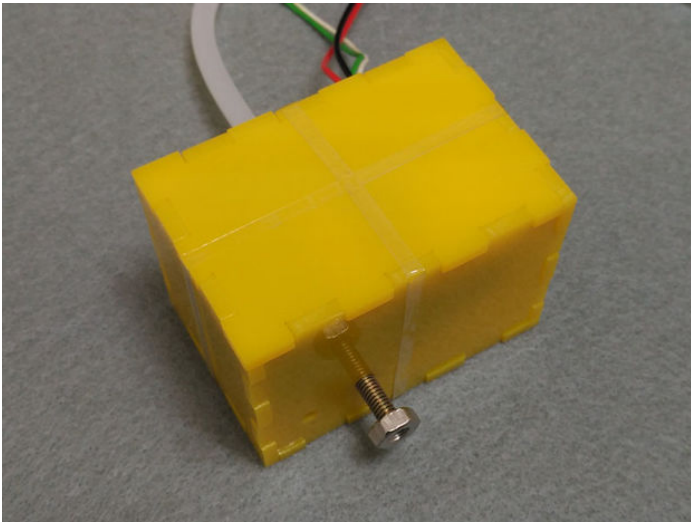


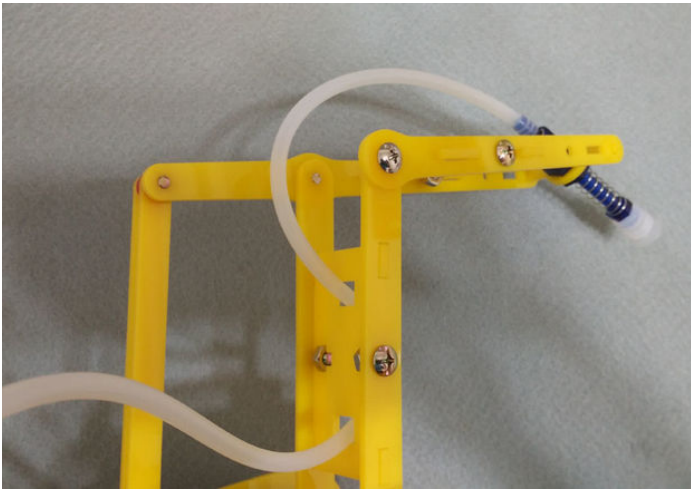
Step 17: Vacuum

materials:

1. vacuum
2. M4x12 x 2
3. M4 nuts x 2



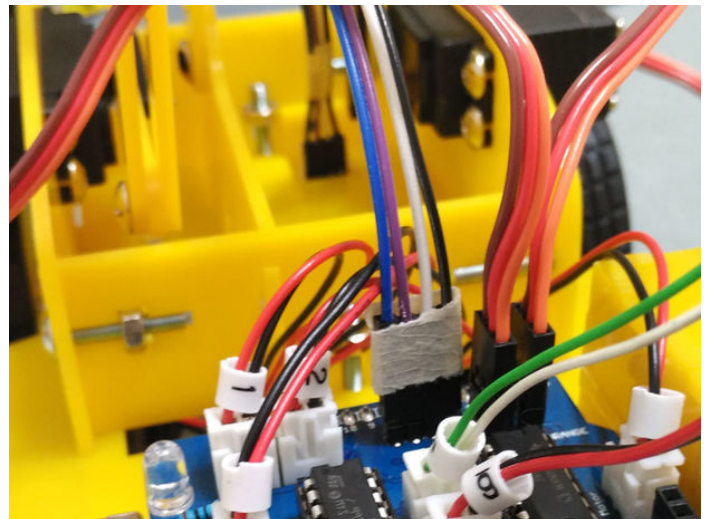
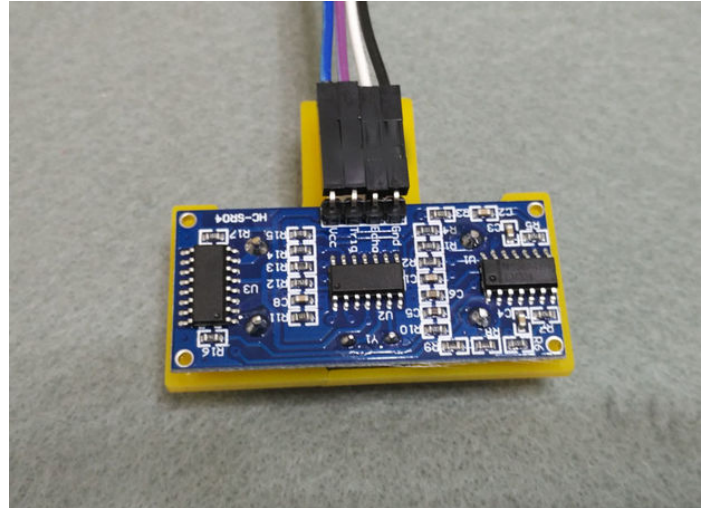
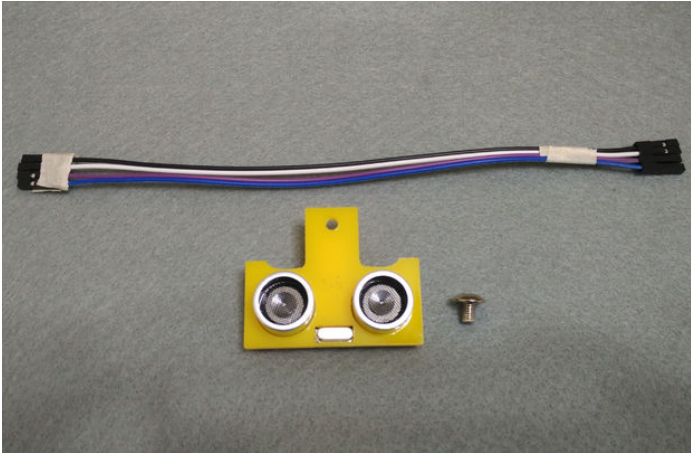


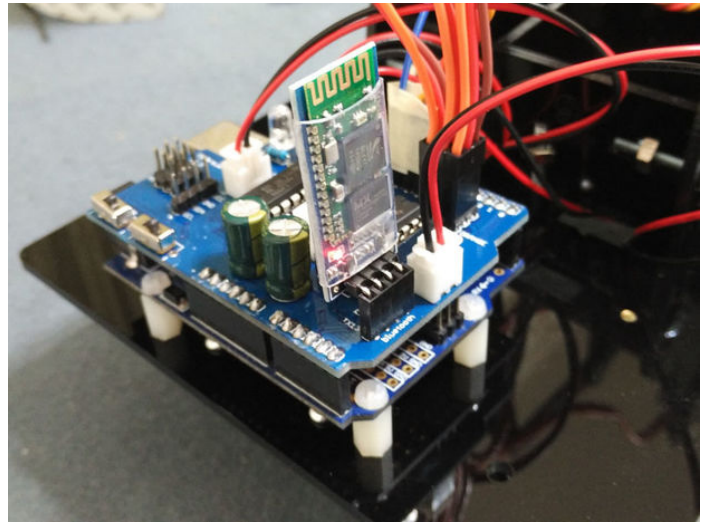
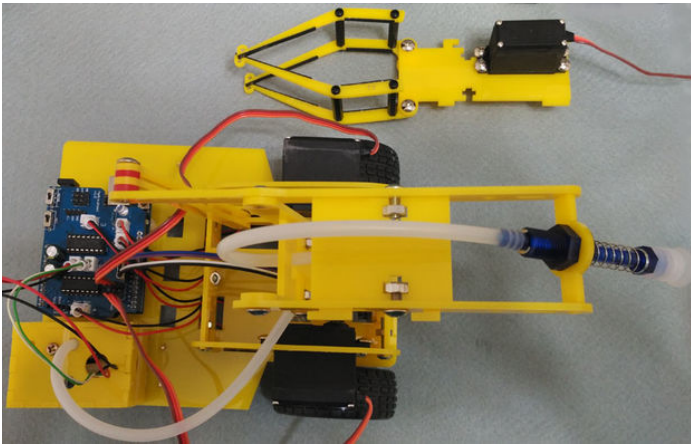


Step 18: Ultra sound sensor

materials:

1. ultra sound sensor
2. dupon 4-pin cable
3. M4x6

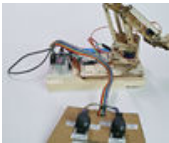




Step 19: Battery charger



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